

(12) **United States Patent**
Taylor et al.

(10) **Patent No.:** **US 9,410,304 B2**
(45) **Date of Patent:** **Aug. 9, 2016**

(54) **LIFT ASSEMBLY FOR A WORK VEHICLE**

(71) Applicant: **CNH Industrial America, LLC**, New Holland, PA (US)

(72) Inventors: **Lance Taylor**, Wichita, KS (US); **John Moffitt**, Wichita, KS (US)

(73) Assignee: **CNH Industrial America LLC**, New Holland, PA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 40 days.

(21) Appl. No.: **14/263,049**

(22) Filed: **Apr. 28, 2014**

(65) **Prior Publication Data**
US 2015/0308072 A1 Oct. 29, 2015

(56) References Cited	
U.S. PATENT DOCUMENTS	
4,355,946 A *	10/1982 Wykhuis E02F 3/3405 414/707
5,192,179 A	3/1993 Kovacs
5,470,190 A *	11/1995 Bamford B60K 20/00 414/686
5,542,814 A *	8/1996 Ashcroft E02F 3/3405 414/685
5,609,464 A *	3/1997 Moffitt E02F 3/3405 414/685
6,109,858 A *	8/2000 Deneve E02F 3/34 414/685
6,132,163 A *	10/2000 Andrews E02F 3/3405 414/685
6,325,589 B1 *	12/2001 Jang E02F 3/3405 414/685
6,474,933 B1 *	11/2002 Hoechst E02F 3/283 414/686
6,616,398 B2	9/2003 Dershem et al.
6,796,762 B2 *	9/2004 Vicars, III E02F 3/3405 414/685
6,854,951 B2	2/2005 Mimuro
6,866,466 B2	3/2005 Roan et al.
(Continued)	

(51) **Int. Cl.**
E02F 3/43 (2006.01)
E02F 9/26 (2006.01)
E02F 3/34 (2006.01)
E02F 3/42 (2006.01)

(52) **U.S. Cl.**
CPC **E02F 3/431** (2013.01); **E02F 3/3405** (2013.01); **E02F 3/3414** (2013.01); **E02F 3/422** (2013.01); **E02F 9/264** (2013.01)

(58) **Field of Classification Search**
CPC E02F 3/3414; E02F 3/3405; E02F 9/2004; E02F 9/2217; E02F 9/2296; E02F 9/2207; E02F 3/431; E02F 9/2292; E02F 9/24; E02F 3/432; B60G 2200/132; B60G 2202/134; B60G 2200/422; B60G 2202/154; B60G 2204/4605; B60G 2300/32; B60G 2600/02; B60G 17/018

See application file for complete search history.

FOREIGN PATENT DOCUMENTS

EP 2503063 A2 9/2012

Primary Examiner — Truc M Do

(74) *Attorney, Agent, or Firm* — Sue C. Watson

(57) **ABSTRACT**

In one aspect, a lift assembly for a work vehicle may include a loader arm and a control arm extending between first and second ends. The first end may be coupled to a chassis of the vehicle at a first pivot point and the second end may be coupled to a rear end of the loader arm at a second pivot point. Additionally, the lift assembly may include a lift cylinder coupled between the loader arm and the chassis and a control cylinder extending between upper and lower ends, with the upper end being coupled the control arm and the lower end being coupled to the chassis at a third pivot point.

17 Claims, 8 Drawing Sheets

